
METHODS OF DIGITIZING INTELLECTUAL RESOURCES

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Abstract.

The strategic tasks of developing any organization and implementing short-term regimes are considered from the perspective of its employees, specifically focusing on the functions performed by the demanded human resources, which are referred to as labor-intensive activities. People differentiate various resources used by organizations, particularly requiring distinct managerial methods. Managing human resources, based on their unique characteristics, represents a distinct type of activity, requiring specific qualities in individuals engaged in these activities. This article primarily addresses the theoretical aspect of digitizing human resources management and proposes a structured approach to conducting systematic research on the demands of highly skilled personnel. A software package is provided.

1. Introduction

Digitalization in personnel management means the application of digital technologies and tools for automation, optimization, and improvement of processes related to human resources management within an organization. Digital methods help make personnel management more efficient, transparent, and adaptive, allowing a focus on strategic tasks.

Below are some of the digitalization methods used in personnel management:

Using HR portals and electronic HR systems: HR portals and Human Resources Information Systems (HRIS) enable the automation of various processes, such as recruitment, talent acquisition, time management, employee assessment, training and development, performance management, and other HR operations.

Recruitment process automation: Employing digital tools simplifies and accelerates the hiring process, including job posting, resume sorting, conducting online interviews, skill analysis of candidates, etc.

Cloud solutions and data storage: Utilizing cloud systems ensures safer and more efficient storage and exchange of personnel-related data. Cloud solutions also provide data accessibility from any network point.

Data analytics usage: Digital analytics tools allow the analysis of large volumes of personnel data, identifying trends and patterns, and making informed decisions based on data.

Overall, these digitalization methods enhance the effectiveness of personnel management and contribute to better organizational outcomes.

E-learning and Employee Development: Digitalization allows providing employees with the opportunity for online learning and skill development, enhancing the effectiveness of training and knowledge accessibility.

Use of Chatbots and Artificial Intelligence: Chatbots can offer employees information and answers to questions regarding policies, procedures, benefits, etc. Artificial intelligence can also assist in analyzing employee performance and providing development recommendations.

Electronic Forms and Signatures: Utilizing electronic forms and signatures simplifies document management processes, such as signing employment contracts, vacation requests, etc.

Performance Management and Feedback: Digitalization enables the automation of performance management processes, goal setting, and providing feedback to employees.

Digitalization in personnel management offers numerous advantages, including improved efficiency, reduced time and costs for processes, increased data accuracy, and enhanced employee satisfaction. However, implementing digital methods also requires ensuring cybersecurity, training employees, and addressing other challenges associated with digital transformation.

To achieve the set goals, a company utilizes resources such as the labor of professors and skilled workers, laboratory equipment and metalworking machines, oil and raw cotton materials, metal ores, and water resources.

The management of material and natural resources is an integral part of personnel management within any organization.

The efficient use of the human factor in production requires not only technical skills (operating machines, working with computers, understanding the products being manufactured) but also takes into account human-related factors (customer relations, the ability to work with significant effort, and interpersonal skills). The human factor in production is related to material and natural resources, its structure, and its culture, but initially, it is determined by organizational goals.

The effective utilization of each employee depends on their ability to perform the assigned tasks successfully.

Competence in an employee refers to their professional qualifications, sufficient physical strength, and health, as well as general cultural and moral qualities.

Many factors contribute to an employee's willingness to work, such as compensation, professional growth prospects, and the attitude and behavior of supervisors. An employee's ability to fulfill their job responsibilities is determined by:

- The potential (competence) that the employee possesses when joining the company;
- Employees' training related to the skills required in the company.
- Their physical and mental conditions.
- Employee evaluations received from the company, either through official assessments or daily advice from supervisors.

The theory of "Scientific Management" or "Scientific Administration," primarily based on Frederick Taylor's works during the early years of this century, has since been developed and refined by other scholars.

This theory is an essential component of personnel management in any company.

Regarding the realization of these goals, much depends on the correct selection and assignment of workers, not only their technical skills (knowing how to operate machines, work with computers, understand the products produced) but also considering human factors (customer relations, dealing with significant effort, and interpersonal skills). The human factor used in production refers to material and natural resources, its structure, and culture, but it is primarily determined by organizational goals.

Personnel departments emerged to deal with these matters in most companies, commonly referred to as Human Resources departments. In the 1950s and 1970s, industrialized countries undertook a systematic effort to improve labor relations through state funding.

During the Second World War, personnel departments took on a crucial role, particularly in the United States and the United Kingdom, by fulfilling the essential task of hiring thousands of new employees in all professions and providing them with training.

In recent times, the management of "efficiency" has further developed, based on economic indicators, namely the production of goods within a given time unit, the methods of production, and the management of the number of employees.

In the 1960s and 1970s, American business schools expanded their curricula to include subjects related to human resources, such as industrial psychology, organizational behavior, and human resource management.

During these years, the management of human resources transitioned from episodic practices to formal organizational procedures, allowing companies to identify and address the long-term needs of their workforce.

At the end of the 1970s, specialized organizations for personnel management emerged in countries experiencing rapid development, notably in the United States, significantly influencing the theoretical and practical advancements in personnel management.

Personnel management became more effective and widely adopted, and the "3/4" rule gained popularity, where companies were required to hire only 75% of the workforce to reduce labor surplus, and the principle of "one organization for the entire career" was sharply criticized.

In the 1990s, the rapid progress in science and technology, market expansion, and intensified competition posed new challenges for specialists in personnel management, including:

- Ensuring that employees' skills are compatible with the stringent requirements of the modern economy.
- Monitoring rising costs related to workforce development in developing countries and maintaining competitiveness in compensation packages.
- Implementing methods to encourage commitment and loyalty in employees who do not have physical presence in the company but work remotely and maintain professional communication with the outside world through electronic means.
- Identifying ways in which multinational corporations can take advantage of lower labor costs in countries with abundant labor resources while adhering to the ethical responsibilities to improve the welfare of these countries' populations.

In contemporary society, each company has its unique characteristics and activities, and various types of businesses coexist. When dealing with human resources, each company considers its own specific aspects and assigns tasks tailored to its objectives (see the figure).

The management of human resources is not a simple task.

Firstly, each company recruits the necessary human resources, i.e., employees, to achieve its objectives. The methods of selecting employees depend on the characteristics of their activities and the terms and conditions.

Secondly, without exception, all companies provide "training" to their employees. The goal is to help employees understand their tasks and align their skills and qualifications with these tasks.

Thirdly, organizations evaluate the participation of each employee in achieving their goals. The forms of evaluation differ according to the types of companies - they may include expressing gratitude, promotion, granting a higher position, awarding a promotion, conducting annual assessments, and performance evaluations.

Finally, each company motivates its employees in a specific way, meaning they encourage employees to work diligently, invest their time, efforts, intelligence, and capabilities to achieve the company's objectives. The most common and traditional form of motivation is monetary rewards or payment for work.

First of all, each company recruits the necessary human resources, namely employees, to achieve its goals. The methods of selecting employees depend on their professional qualifications and conditions.

Secondly, without exception, all companies provide their employees with "training," which is aimed at familiarizing them with the tasks they have to perform and adapting their skills and competencies to these tasks.

Thirdly, organizations evaluate the participation of each employee in achieving their goals. There are various forms of evaluation, as there are many types of companies - these can be expressing gratitude, promoting a position (rank), giving a promotion, passing the annual attestation, and being based on indicators.

Finally, each company motivates its employees in a certain way, namely by making them work, spending their time and energy in achieving the company's goals. The most common and traditional forms of motivation are remuneration or payment for work.

The tasks mentioned above exist in each company, but they can vary in different forms and levels.

In this regard, selecting, training, evaluating, motivating, and managing personnel for the successful development of the organization require specific methods, measures, plans, and strategies.

2. Method and the model

In the process of decision-making, often the question arises whether it is necessary to consult with an experienced expert or whether it is sufficient to rely on an inexperienced one to address a known issue. The classic formulation of acceptable cases requires the presence of management objectives, goals, resources, and limitations [4].

Let us examine the accepted model for conducting systematic investigations into the requirements for highly qualified employees.

The proposed model is used to assess the opportunities available in companies across the country in terms of preparing highly qualified employees. It takes into account the resources of the companies and how they can be effectively used to meet the requirements for highly qualified employees in an organized and systematic manner.

The implementation is carried out in two stages. In the first stage, a technical analysis is conducted to prepare highly skilled employees, while in the second stage, an analysis of the personal qualities is performed. The model for the implementation is as follows: [Please note that the specific model is not provided in the text; the information provided is a general description of the context without the actual model itself.

A_{ij} Aiming to effectively prepare highly qualified employees, a comprehensive analysis is conducted to structure the expertise required in specialized fields (dividing each request according to its specific relevance).

The goal is to perform accurate assessments for the purpose of talent development.

B_{ij} - i In the "j" company, there is a possibility of preparing specialists in a wide range of fields for the "k" department, there is a demand for specialists in the "j" field of expertise 3_{ik} . Q_{ijk} - the importance of preparing highly skilled employees in the "j" field of expertise for the "k" department in the "i" company is significant. To meet the high demand for skilled employees in the "j" field for the "k" department in the "i" company, it is essential to develop a guidance for preparing highly qualified personnel. The indicator for preparing specialists is determined through direct assessments, as well as evaluations using a scoring system with multiple factors considered $Q = f(K_1, K_2, \dots, K_p)$.

The factors influencing Q include the following:

K₁ - the indicator of competent employees, U, is determined using the following formula:

$$K_1 = \frac{C}{O_H},$$

here C - the number of competent employees.,

O_H - the total number of employees.

k₂ - The direction of expertise related to the j-th specialization.

k₃ - The suitability of the given candidates (i.e., the composition and etc. of the employees) for preparing specialists in the specified expertise is proposed for the corresponding company.

k₄ - The preparation period for specialists in the field of j expertise, i.e., the

coefficient of increasing their qualifications within a certain period:

$$k_4 = \frac{C_4}{O_4},$$

here C_4 - the number of employees who have improved their qualifications in the field of j expertise during their period.,

O_4 - the number of employees who have increased their skills and competencies in all positions.

It is possible to continue the list of coefficients based on the complexity of the task. It is essential to normalize the integrated value to bring different factors to the same scale for better assessment.

The proposed Q functional has the following form:

$$Q = \sum_{v=1}^p k_v \quad \text{or} \quad Q = \prod_{v=1}^p k_v.$$

X_{ijk} Through this, we propose the number of specialists in the j field offered for preparation in the i company for the k department. The relevance of preparing specialists in the j field for the k department in the i company is emphasized denoted by Q_{ijk} . In this case, it represents the overall relevance for preparing highly skilled and competent employees for the k department

$$Z_k = \sum_{i=1}^m \sum_{j=1}^n Q_{ijk} X_{ijk},$$

here $k = \overline{1, L}$, L - number of departments.

We will establish the evaluation system based on the following conditions of the issue.

1. All departments, particularly the k -th department, need to define the requirements for preparing specialists in j specialization.

$$\sum_{j=1}^n X_{ijk} = 3_{ik}; \quad j = \overline{1, m}, k = \overline{1, L}$$

2. All available opportunities for preparing specialists in the j specialization at the i company should be utilized, i.e., all possible resources and options must be utilized

$$\sum_{k=1}^L X_{ijk} = B_{ij}; \quad i = \overline{1, n}, \quad j = \overline{1, m}$$

The mathematical model of the issue of designing an efficient system for preparing highly skilled personnel can be expressed as follows:

Finding the maximum value of the objective function.

$$Z_k = \sum_{j=1}^m \sum_{i=1}^n Q_{ijk} X_{ijk} \rightarrow \max$$

requirements

$$\sum_{k=i}^L X_{ijk} = B_{ij}; \quad i = \overline{1, n}, \quad j = \overline{1, m},$$

$$\sum_{j=1}^n X_{ijk} = 3_{ik}; \quad i = \overline{1, m}, \quad k = \overline{1, L},$$

$$X_{ijk} > 0.$$

In this way, our problem comes down to the optimization problem. In the presented model, the provision of qualified and experienced employees in i -th company for j -th specialization corresponds to the demands of k -th department for highly skilled personnel, here $j = \overline{1, m}$.

In such an equalized operation, it can be effective in many cases. To achieve this, it is necessary to select additional applications based on the company's main directions and future specializations of experts. For this purpose, it is essential to analyze the composition of employees in each department, determine their future responsibilities, and define hierarchy based on specializations. For each company, a comprehensive coefficient is calculated.

$$C_{kj} = \frac{C_i}{O_H}.$$

C_i - The number of highly skilled and qualified employees in the specialization;

O_H - The total number of employees;

In accordance with the given coefficient, there is a significant increase in the following manner

$$P_{kj} = \frac{1}{C_{kj}} = \frac{O_H}{C_j}, \quad k = \overline{1, L}, \quad j = \overline{1, m}.$$

In the selection, we enter an additional coefficient.

$$\lambda_j = \frac{V_j}{M_j},$$

here

$$V_j = \sum_{i=1}^n B_{ij}; \quad j = \overline{1, m},$$

$$M_j = \sum_{k=1}^L P_{ij}; \quad j = \overline{1, m}.$$

The final formula for selecting applications is as follows

$$\Pi_{kj} = \gamma_j \rho_k \lambda_j P_{kj},$$

here Π_{kj} - k - the number of specialists that can be prepared for the department in accordance with the j -specialization;

γ_j - The coefficient of recommendation for the j -specialization;

ρ_k - The coefficient for the prognose of department k .

λ_j - The coefficient determining the compatibility of the enterprises.

P_{kj} - The coefficient of recommendation for the j -specialization in the k -department. In this case, the following relationship is established

$$\sum_{k=1}^L \Pi_{kj} = \sum_{i=1}^n B_{ij}; \quad j = \overline{1, m}$$

it is necessary to present the request for the demand of specialists in a way that aligns with the capabilities of the company.

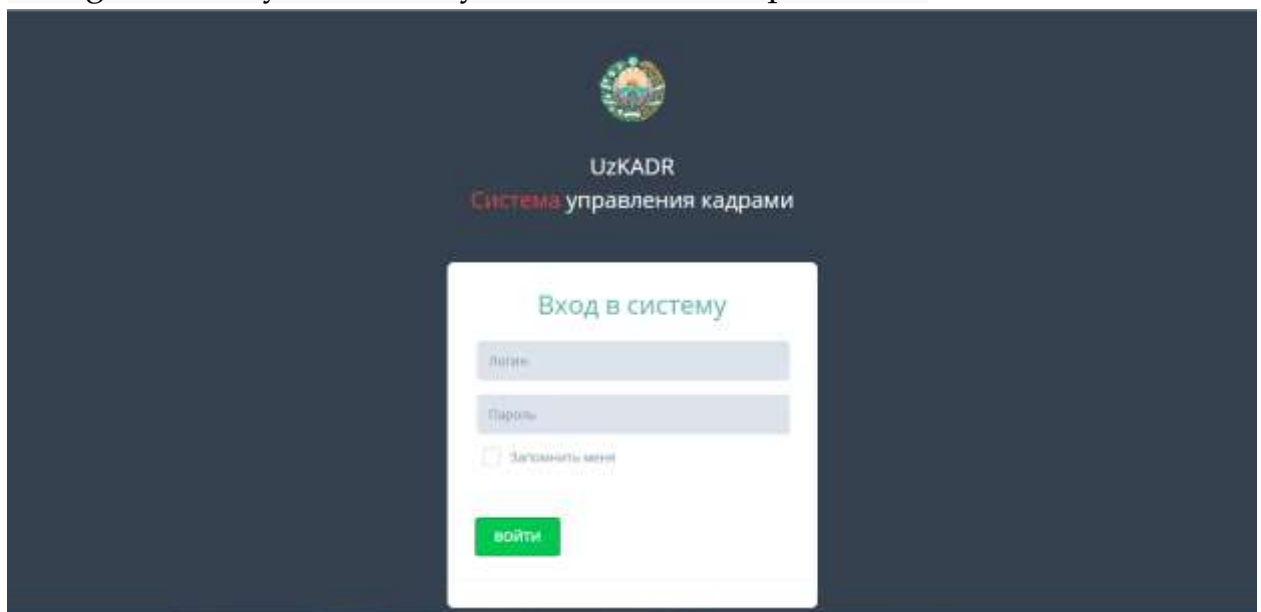
3. Results

The Human Resources Management System is developed as a powerful tool for optimizing the utilization of labor resources. The system is designed to implement a well-thought-out policy for attracting, accounting, developing, and retaining personnel, taking into account the best practices of personnel management.

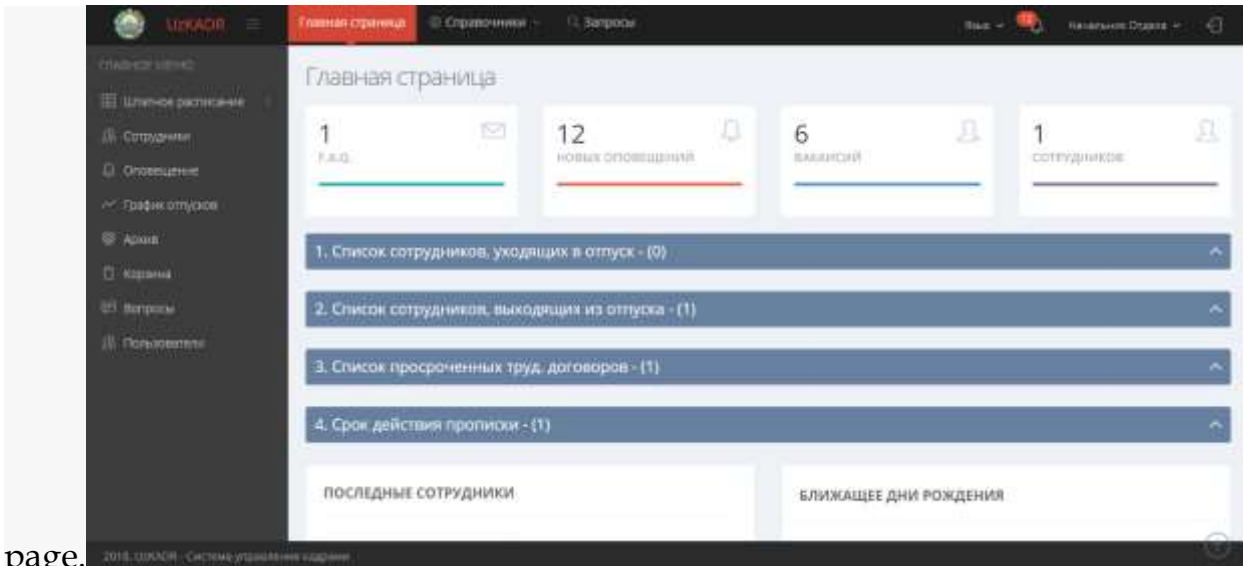
Additionally, the system includes methods and techniques for addressing HR issues such as recruitment, promotion, hiring, dismissal, and more. It also encompasses methods and techniques for organizing work and determining salary structures.

Login to the system.

To log in to the system, enter your username and password.



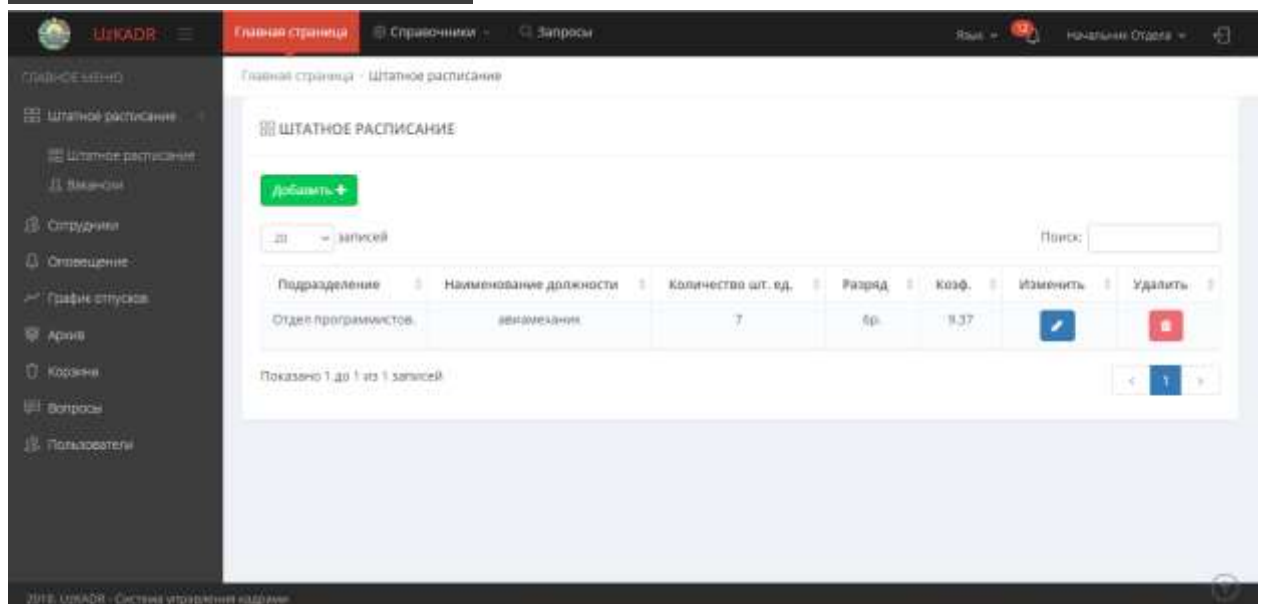
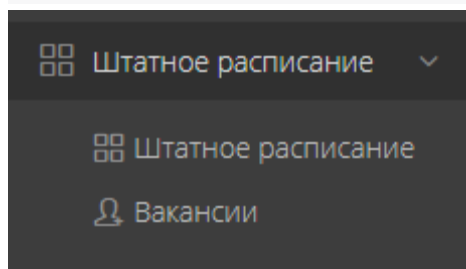
After entering the correct information, the system will redirect you to the main



page.

Working with staffing schedules

To do this, click on the "Staffing Schedule" link on the left side menu.



To create a staffing schedule, click on the "Add" button.

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After adding the staffing schedule, the system automatically calculates the vacant positions.

Подразделение	Наименование должности	Количество шт. ед.	Занято	Свободно
Отдел программистов.	автомеханик	7	1	6

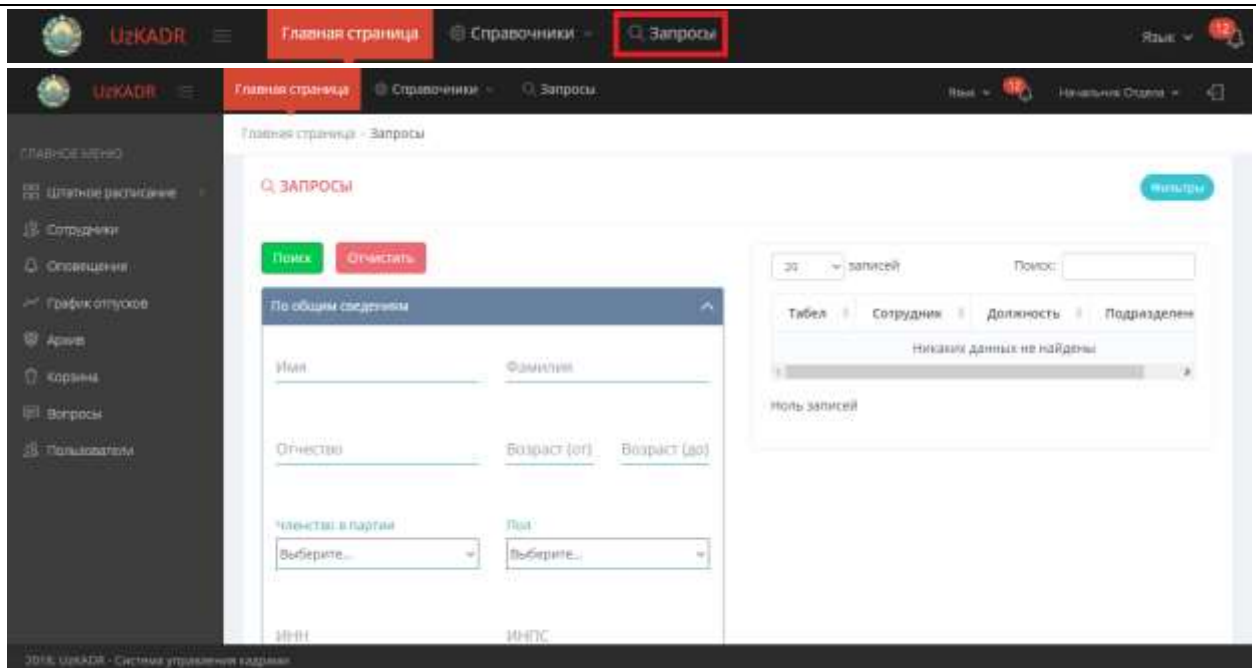
Показано 1 до 1 из 1 записей

2018. UZKADR - Система управления кадрами

If you want to export the vacancies, click on the "Excel" button.

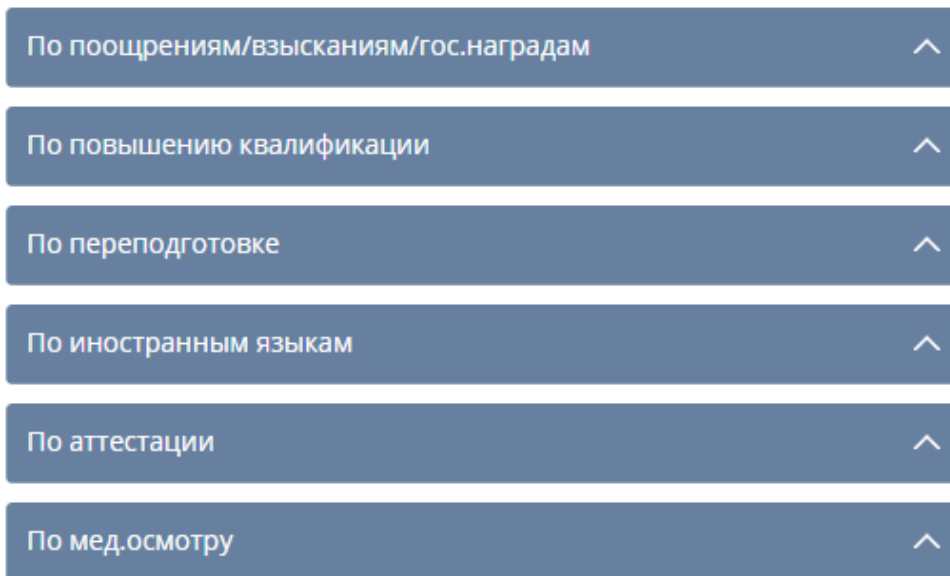
Employee Search (Queries)

To find the required employees, you need to click on the "Queries" link at the top of the menu.

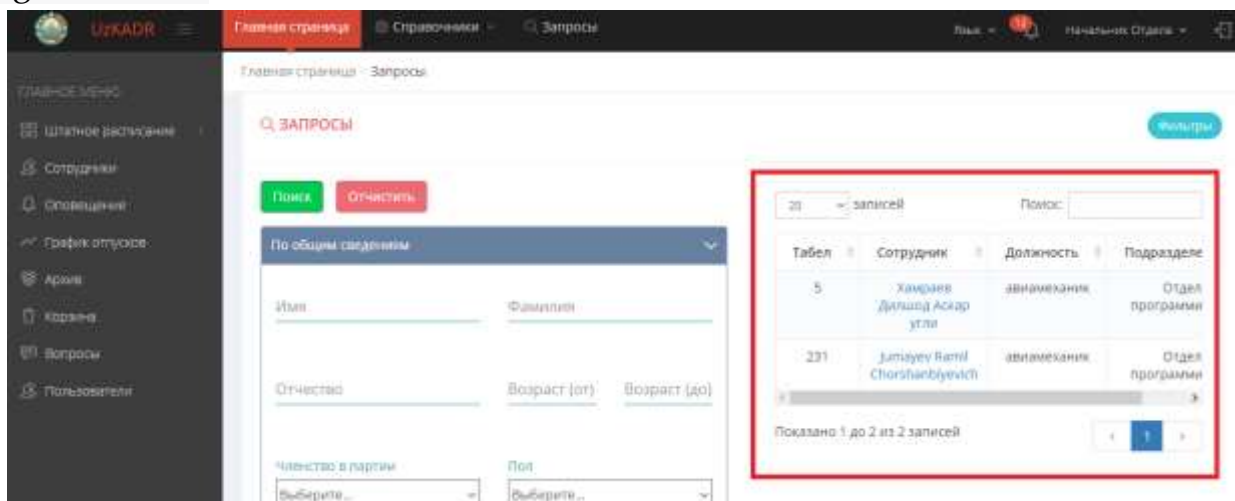


There are also other filters at the bottom:

- По общим сведениям ^
- Место работы v
- По паспортным данным ^
- По образованию ^
- Стаж работы ^
- По трудовой деятельности ^
- По отпускам ^
- По семье ^
- По воинскому учету ^
- По командировкам ^
- По больничным листам ^



After filtering, click on the "Search" button, and all the results will appear on the right in tables.



5. Conclusion

The personnel management is one of the key aspects of a company's activities, where the company owner, based on their sound judgment and extensive experience, makes decisions regarding their employees.

The system provides the following capabilities:

1. Administrative activities: Application of the main legislative provisions in the field of labor organization and remuneration, collective agreements.
2. Employment: Hiring, orientation to the workplace and working conditions, internal job transfers within the enterprise, promotions to higher positions, and dismissals.

3. Training, retraining, and skill development of personnel: This includes identifying the potential abilities of company employees and determining ways for their advancement along the production or service line.

4. Material rewards: Job and position certification, salary structure considering social benefits, labor market research, and development of specific provisions in the collective agreement.

The system is designed for the automated management of personnel information for enterprises and institutions, including:

- Maintaining the organization's staffing table.
- Keeping personal employee records.
- Managing personnel orders.
- Recording and tracking working hours.
- Keeping records of business trips.
- Managing information about employees in the reserve for position replacement.

- Searching for specific information using various criteria.
- Generating analytical reports and references.
- Maintaining the system's directories.
- Importing and exporting personnel information.
- Assigning user access rights to system objects.

Enhancing the value of diligent work is a strategy that, together with validating employees' normal work capabilities, elevates the social significance of labor and fosters the development of a fresh work ethic. The strategy and tactics for emphasizing labor activity involve providing employees with a long-term influence, whereby the designated objectives are clearly delineated, shaping the foundation of work and thereby advancing their work potential. Employee motivation should align with their needs, benefits, and capabilities, meaning that the process of motivation must be in harmony with the mechanism of employee empowerment.

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MAHALLALARDA MILLIY SPORT O'YINLARINI TASHKIL ETISHNING IJTIMOIY PSIXOLOGIK XUSUSIYATLARI

<https://doi.org/>

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Annotatsiya

Ushbu maqolada O'zbekiston sharoitida mahallalarda milliy sport o'yinlarini tashkil etish, ushbu tadbirlar ijtimoiy psixologiyaning turli jabhalarini qanday namoyon etishini o'rganish ko'rib chiqiladi. Shuningdek, guruh dinamikasi, o'ziga xosligi, guruh ichidagi/guruh ichidagi dinamikasi va qadriyatlarini o'rganadi, shu bilan birga millat ichida birlik va madaniy xilma-xillikni targ'ib qilishda sportning rolini ta'kidlaydi. Ushbu maqolada biz O'zbekistonda milliy sport o'yinlarini tashkil etishga chuqurroq kirib, ijtimoiy psixologiyaning kam muhokama qilinadigan jihatlariga oydinlik kiritamiz. Xususan, sportning yoshlarning psixologik va jismoniy jihatdan sog'lom va barkamol bo'lib ulg'ayishidagi ahamiyati haqida alohida taxlil etilib, fikr va mulohazalar qilinadi.

Kalit so'zlar

O'zbekiston, Milliy sport o'yinlari, Ijtimoiy psixologiya, Qadriyatlar va normalar, Madaniy xilma-xillik, Sport mahorati, Shaxsiyat va Ijtimoiy ta'sir.

СОЦИАЛЬНО-ПСИХОЛОГИЧЕСКАЯ ХАРАКТЕРИСТИКА ОРГАНИЗАЦИИ НАЦИОНАЛЬНЫХ СПОРТИВНЫХ ИГР В МЕСТНЫХ СЕРИЯХ

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Аннотация

В трех статьях рассматривается, как организация и производство национальных спортивных команд в районах Узбекистана раскрывают различные аспекты социальной психологии. исследует группу, групповую динамику, идентичность, внутригрупповую динамику и ценности, подчеркивая при этом роль спорта в содействии единству и культурному разнообразию внутри нации. Организуя спортивные игры в Узбекистане, мы глубже погружаемся в малообсуждаемую область социальной психологии. спорта, чтобы дать специальный